



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

NCR Docket No. 9172

Application of:

TRAN, H. T. et al.

Group Art Unit: 2194

Serial No. 09/587,302

Examiner: ANYA, CHARLES E.

Filed: June 5, 2000

For: CONTROLLING SOFTWARE COMPONENTS IN A MULTI-NODE
PROCESSING SYSTEM

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF TRANSMITTAL LETTER

Sir:

Transmitted herewith for filing is an Appeal Brief to the Final Rejection dated
October 4, 2006.

☒ Please charge Deposit Account No. 14 0225 for the Appeal Brief fee or any other
fees associated with the filing of said Appeal Brief.

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Account No. 14 0225.

Respectfully submitted,

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CERTIFICATION OF MAILING UNDER 37 CFR 1.8

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By:
Name: Michelle George



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P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF ON APPEAL

Sir:

This is an Appeal Brief in furtherance of the Notice of Appeal filed on January 4, 2007. In light of this Brief, Applicant asks the Board of Patent Appeals and Interferences to reconsider this application.

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CERTIFICATION OF MAILING UNDER 37 CFR 1.8

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By: Michael George
Name: Michael George

(I) REAL PARTY IN INTEREST

The present application is assigned to NCR Corporation.

(II) RELATED APPEALS AND INTERFERENCES

There are currently no known active appeals or interferences related to the present application.

(III) STATUS OF CLAIMS

Claims 1-3, 5, 7, 9-11, 13-16, 19-21 and 23-35 are pending in the application.

Claims 1-3, 5, 7, 9-11, 13-16, 19-21 and 23-35 are all rejected and are being appealed. Such claims are shown in the Appendix attached to this Appeal Brief

(IV) STATUS OF AMENDMENTS

The U.S. Patent and Trademark Office issued a Final Official Action in the prosecution of the present application on August 2, 2005. In response to this Final Official Action, Applicant filed a Notice of Appeal and Pre-Appeal Brief Request for Review on December 2, 2005.

A Notice of Panel Decision from Pre-Appeal Brief Review was issued by the U.S. Patent and Trademark Office on January 6, 2006. The Panel Decision withdrew the prior rejection of claims 1-3, 5, 7, 9-11, 13-16, 19-21 and 23-35, and reopened prosecution of the present application. The rejection contained in the March 8, 2006 Official Action, and repeated in the Final Official Action dated October 4, 2006 differs little from the prior rejection of the claims which was withdrawn in accordance with the decision of the Pre-Appeal Brief Review Conference.

A response to the Final Official Action dated October 4, 2006 has not been filed in the present application.

(V) SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1

Claim 1 recites a method of controlling software components in a processing system having plural nodes, comprising:

receiving a request to start the processing system (*see, e.g.*, Application, pg. 6, lines 19 through 23, Figure 3, block 202);

launching a start routine in a first one of the nodes in response to the request; the start routine causing one or more services to be invoked in each of the nodes (*see, e.g.*, Application, pg. 6, lines 23 through 28, Figure 3, blocks 203 through 205);

determining one or more selected software components to start in each of the nodes (*see, e.g.*, Application, pg. 6, lines 29 through 31, Figure 3, block 206); and

the services starting the selected software components in each of the nodes of the processing system (*see, e.g.*, Application, pg. 6, line 31 through pg. 7, line 5, Figure 3, blocks 208 through 210).

Claim 13

Claim 13 recites a database system comprising:

a plurality of nodes (*see, e.g.*, Application, pg. 3, lines 1 through 10, Figures 1, 2, and 4-9, elements 12A and 12B);

software components executable in the plurality of nodes, the software components comprising a query coordinator in each of the plurality of nodes to

process database queries (*see, e.g.*, Application, pg. 3, lines 25 through 27, Figures 1, 2, and 7-9, QUERY COORDINATOR 32);

a manager module executable in the database system to invoke services in the plurality of nodes to control starting of the software components (*see, e.g.*, Application, pg. 3, lines 21 through 24, Figures 1, 2, and 4-9, element 22); and

a start procedure executable in a first one of the plurality of nodes to invoke the services in the plurality of nodes through the manager module (*see, e.g.*, Application, pg. 4, lines 11 through 15, Figures 1 and 2, element 34).

Claim 20

Claim 20 recites a database system comprising:

a plurality of nodes (*see, e.g.*, Application, pg. 3, lines 1 through 10, Figures 1, 2, and 4-9, elements 12A and 12B);

database software components executable in the plurality of nodes (*see, e.g.*, Application, pg. 3, lines 25 through 27, Figures 1, 2, and 7-9, QUERY COORDINATOR 32, DATA SERVER 26, 28, 30); and

a manager module in each of the plurality of nodes executable to control the database software components in the plurality of nodes (*see, e.g.*, Application, pg. 4, lines 11 through 15, Figures 1 and 2, START PROCEDURE 34) and to enable a monitoring module to monitor statuses of the database software components in the plurality of nodes (*see, e.g.*, Application, pg. 4, lines 25 through 30, Figure 2, START SERVICE 102; and Application, pg. 7, lines 24 through 28, Figures 5 through 8, MONITOR 404).

Claim 21

Claim 21 recites an article comprising one or more machine-readable storage media containing instructions that when executed cause a database system having plural nodes to:

receive a command to start database software components in the plural nodes (*see, e.g.*, Application, pg. 6, lines 19 through 23, Figure 3, block 202); launch a start routine in a first one of the plural nodes in response to the command (*see, e.g.*, Application, pg. 6, lines 23 through 31, Figure 3, blocks 203 through 206);

issue requests, from the start routine, to the plural nodes (*see, e.g.*, Application, pg. 6, line 31 through pg. 7, line 3, Figure 3, block 208); and

in response to the requests, invoke services in the plural nodes to start the database software components (*see, e.g.*, Application, pg. 7, lines 3 through 5, Figure 3, blocks 209 through 210).

Claim 33

Claim 33 recites a database system comprising:

a plurality of nodes (*see, e.g.*, Application, pg. 3, lines 1 through 10, Figures 1, 2, and 4-9, elements 12A and 12B);

database software components executable in the plurality of nodes (*see, e.g.*, Application, pg. 3, lines 25 through 27, Figures 1, 2, and 7-9, QUERY COORDINATOR 32, DATA SERVER 26, 28, 30); and

a start procedure executable in a first one of the plurality of nodes to invoke services in each of the plurality of nodes (*see, e.g.*, Application, pg. 4, lines 11 through 20, Figures 1 and 2, START PROCEDURE 34), and

wherein the services are executable to start the database software components (*see, e.g.*, Application, pg. 4, lines 11 through 15, Figures 1 and 2, START PROCEDURE 34).

(VI) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Pursuant to the October 4, 2006 Final Official Action claims 1-3, 5, 7, 9-11, 20, 23, 26 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,802,367 to Held et al. (hereinafter "Held") in view of U.S. Patent 5,748,896 to Daly et al. (hereinafter "Daly"). In addition, claims 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Held in view of Daly, and further in view of U.S. Patent 5,613,148 to Bezviner et al. (hereinafter "Bezviner"). Finally, claims 13-16, 19, 21 and 28-35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bezviner in view of Daly.

(VII) ARGUMENT

As stated above, a Pre-Appeal Brief Review Panel Decision, mailed on January 4, 2006, withdrew a prior, similar, rejection of claims 1-3, 5, 7, 9-11, 13-16, 19-21 and 23-35, and reopened prosecution of the present application. The rejection contained in the March 8, 2006 Official Action, and repeated in the Final Official Action dated October 4, 2006 differs little from the prior rejection of the claims which was withdrawn in accordance with the decision of the Pre-Appeal Brief Review Panel.

In light of the arguments below, Applicant asks the Office to reconsider these rejections and to allow all of the claims.

The 103(a) Rejections over Held in view of Daly

With regard to Applicant's claim 1, the Examiner states that Held is "silent with reference to causing a service to be invoked in plurality of nodes/starting selected software components in plurality of nodes" (*see, e.g.*, October 4, 2006 Official Action, pg. 3, line 3 through 5). Accordingly, the Examiner relies on Daly to address these deficiencies of Held (*see, e.g.*, October 4, 2006 Official Action, pg. 3, lines 6 through 8). However, as pointed out in Applicant's prior replies and the Pre-Appeal Brief Request for Review filed December 2, 2005 Daly also does not provide the noted deficiencies.

The present Final Official Action refers to Figure 5A of Daly and the text at column 8, lines 41-67 and column 9, lines 66-67 as teaching "causing a service to be invoked in plurality of nodes/starting selected software components in plurality of nodes." Figure 5A illustrates an architecture for a remote network administrative apparatus, the architecture including a component repository, a server manager component 104 and a server manager window 108. The text at column 8, lines 41-67 describes a process for obtaining network service instantiation data from a computer network and returning that data to the server manager component 104 to be displayed in server manager window 108. Column 9, lines 66-67 describes the creation of a PrintService object 112 by server manager component 104.

It is not seen that Figure 5A or the referenced text of Daly teaches or suggests "the start routine causing one or more services to be invoked in each of the nodes," let alone the invoked services starting selected software components in each of the nodes as further required by Applicant's claim 1 and found to be missing by the Examiner from Held. Accordingly it is believed that claim 1 and its dependent claims 2, 3, 5, 7, 9-11, 20, and 24-27 are patentable over Held in view of Daly.

The 103(a) Rejections over Bezviner in view of Held

In the October 4, 2006 Official Action, the Examiner states that Bezviner does not teach what amounts to the last two elements of Applicant's claim 13, namely a "manager module executable in the database system to invoke services in the plurality of nodes to control starting of the software components," and a "start procedure executable in a first one of the [plurality of] nodes to invoke the services in respective nodes through the manager module" (*see* October 4, 2006 Official Action, pg. 7-8, ¶20). As a result, the Examiner attempts to rely on Daly to address these deficiencies of Bezviner.

In support of use of Daly to address the deficiencies of Bezviner, the Examiner states that "Daly teaches a manager module executable in the database system to invoke services to control starting of the software components (figure 5A (Server Manager component 104) Col. 8 Ln. 41-67, Col. 9 Ln.66-67) and a start procedure executable in a first one of the nodes to invoke the services in the plurality of nodes through the manager module ("...creates..." Col. 8 Ln. 41-67, Col. 9 Ln.66-67)" (*see* October 4, 2006 Official Action, pg. 8, lines 3 through 8).

As discussed above, Figure 5A of Daly illustrates an architecture for a remote network administrative apparatus, the architecture including a component repository, a server manager component 104 and a server manager window 108. The text at column 8, lines 41-67 describes a process for obtaining network service instantiation data from a computer network and returning that data to the server manager component 104 to be displayed in server manager window 108. Column 9, lines 66-67 describes the creation of a PrintService object 112 by server manager component 104.

It is not seen that Figure 5A or the referenced text of Daly teaches or suggests "a manager module executable in the database system to invoke services in the plurality of nodes to control starting of the software components," and a

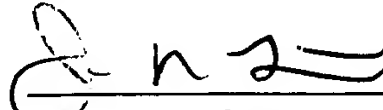
"start procedure executable in a first one of the plurality of nodes to invoke the services in respective nodes through the manager module." Accordingly it is believed that claim 13, as well as dependent claims 14-16, 19, and 28-30 are patentable over Bezviner in view of Daly.

Regarding claim 21, the Examiner similarly relies on Daly to provide teachings lacking in Bezviner. In particular, in the October 4, 2006 Official Action the Examiner states that Bezviner does not explicitly teach, among other things, to "invoke services in the plural nodes to start database software components" as required by Applicant's claim 21 (*see* October 4, 2006 Official Action, pg. 9, ¶25). However, as discussed above in regard to Applicant's claims 1 and 13, it is not seen that Daly teaches this limitation of invoking services in plural nodes to start software components in the plural nodes. Therefore, neither Bezviner nor Daly, taken alone or in combination, teaches or suggests all the elements of Applicant's claim 21. Consequently claim 21 and its dependent claims are believed to be patentable over these references.

Likewise, it is not seen that Daly teaches an element of Applicant's claim 33 the Examiner states is absent from Bezviner, namely "a start procedure executable in a first one of the plurality of nodes to invoke services in each of the plurality of nodes." The result is that claim 33 and its dependents are also patentable over Bezviner in view of Daly.

In view of the foregoing, it is believed that the application including claims 1-3, 5, 7, 9-11, 13-16, 19-21 and 23-35 is in condition for allowance. Early and favorable action is respectfully requested.

Respectfully submitted,



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(VIII) CLAIMS APPENDIX

1. (Previously Presented) A method of controlling software components in a processing system having plural nodes, comprising:

receiving a request to start the processing system;

launching a start routine in a first one of the nodes in response to the request; the start routine causing one or more services to be invoked in each of the nodes;

determining one or more selected software components to start in each of the nodes; and

the services starting the selected software components in each of the nodes of the processing system.

2. (Previously Presented) The method of claim 1, wherein causing the services to be invoked comprises causing WINDOWS® services to be invoked.

3. (Previously Presented) The method of claim 2, further comprising invoking the services with a WINDOWS® service control manager module.

4. (Canceled)

5. (Previously Presented) The method of claim 1, wherein starting the selected software components comprises starting software components defined as WINDOWS® services.

6. (Canceled)

7. (Previously Presented) The method of claim 1, further comprising running an instance of a manager module in each of the nodes, the instance of the manager module in each of the nodes responsive to the start routine to invoke the services.

8. (Canceled)

9. (Previously Presented) The method of claim 1, wherein the first one of the nodes is a master node, wherein launching the start routine is performed in the master node.

10. (Previously Presented) The method of claim 7, further comprising the start routine communicating requests to manager module instances in each of the nodes to start corresponding services.

11. (Previously Presented) The method of claim 1, wherein causing the services to be invoked comprises causing one service to be invoked for each software component.

12. (Canceled)

13. (Previously Presented) A database system comprising:
a plurality of nodes;
software components executable in the plurality of nodes, the software components comprising a query coordinator in each of the plurality of nodes to process database queries;

a manager module executable in the database system to invoke services in the plurality of nodes to control starting of the software components; and

a start procedure executable in a first one of the plurality of nodes to invoke the services in the plurality of nodes through the manager module.

14. (Previously Presented) The database system of claim 13, wherein the manager module comprises plural instances executable on the plurality of nodes.

15. (Previously Presented) The database system of claim 13, wherein the manager module comprises a WINDOWS[®] service control manager.

16. (Previously Presented) The database system of claim 13, wherein the services comprise WINDOWS[®] services.

17. (Canceled)

18. (Canceled)

19. (Previously Presented) The database system of claim 13, wherein the start procedure comprises a start service and a program invokable by the start service.

20. (Previously Presented) A database system comprising:
a plurality of nodes;
database software components executable in the plurality of nodes; and
a manager module in each of the plurality of nodes executable to control the database software components in the plurality of nodes and to enable a monitoring

module to monitor statuses of the database software components in the plurality of nodes.

21. (Previously Presented) An article comprising one or more machine-readable storage media containing instructions that when executed cause a database system having plural nodes to:

receive a command to start database software components in the plural nodes; launch a start routine in a first one of the plural nodes in response to the command;

issue requests, from the start routine, to the plural nodes; and

in response to the requests, invoke services in the plural nodes to start the database software components.

22. (Canceled)

23. (Previously Presented) The method of claim 1, wherein the processing system comprises a parallel database system, and wherein the selected software components comprises database software components.

24. (Previously Presented) The method of claim 23, wherein starting the database software components comprises starting a query coordinator in each of the nodes to process database queries.

25. (Currently Amended) The method of claim 23, wherein starting the database software components comprises starting a data server in each of the nodes to control access of data in storage in the parallel database system.

26. (Previously Presented) The method of claim 1, wherein each a the services monitors a status of a corresponding one of the selected software components.

27. (Previously Presented) The method of claim 1, wherein each of the services monitors for termination of a corresponding one of the selected software components.

28. (Previously Presented) The database system of claim 13, further comprising a storage, wherein the software components further comprise a data server in each of the plurality of nodes to control access to data in the storage.

29. (Previously Presented) The database system of claim 13, wherein each of the services is adapted to monitor for termination of a corresponding query coordinator.

30. (Previously Presented) The database system of claim 13, wherein the start procedure is adapted to be invoked in response to a request to start a database application.

31. (Previously Presented) The article of claim 21, wherein the command to start the database software components comprises a command to start a query coordinator to process database queries and a data server to control access of data in storage in each of the plural nodes.

32. (Previously Presented) The article of claim 21, wherein the instructions when executed cause the database system to cause each of the services to monitor for termination of a corresponding one of the database software components.

33. (Previously Presented) A database system comprising:
a plurality of nodes;
database software components executable in the plurality of nodes; and
a start procedure executable in a first one of the plurality of nodes to invoke services in each of the plurality of nodes, and
wherein the services are executable to start the database software components.

34. (Previously Presented) The database system of claim 33, further comprising a storage, wherein the database software components comprise a query coordinator in each of the plurality of nodes to process database queries, and a data server in each of the plurality of nodes to control access of the storage.

35. (Previously Presented) The database system of claim 33 wherein one service is invoked in each of the plurality of nodes for each of the database software components in the node.

(IX) EVIDENCE APPENDIX

Not applicable

(X) RELATED PROCEEDINGS APPENDIX

Not applicable